

7 a main inductor arranged between a mains electricity input
8 from said network and a mains electricity output to said
9 consumer's premises to allow the low frequency high amplitude
10 mains electricity power signal to pass through the main inductor
11 in a low impedance path from the mains electricity input from
12 said network to said mains electricity output to said consumer's
13 premises for frequencies from zero frequency to a low frequency
14 of said low frequency high amplitude mains electricity power
15 signal; and

16 a coupling capacitor connected between said mains
17 electricity input and a signal input/output line to allow the
18 telecommunication signal to pass through the coupling capacitor
19 in a path between said mains electricity input and the signal
20 input/output line and to attenuate low frequency components of
21 said low frequency high amplitude mains electricity power signal;

22 wherein the main inductor has an impedance for
23 substantially preventing communications signals of at least one
24 megahertz from passing from the mains electricity input from said
25 network to said mains electricity output to said consumer's
26 premises.

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1 Communications apparatus for use with an electricity
2 distribution and/or power transmission network for allowing, in
3 use, a low frequency high amplitude mains electricity power
4 signal to pass from the network to a consumer's premises and for
5 input and/or removal of a telecommunication signal from the
6 network, said communications apparatus comprising:

7 a first inductor arranged between a mains electricity input
8 from said network and a mains electricity output to said
9 consumer's premises to allow the low frequency high amplitude
10 mains electricity power signal to pass through the first inductor
11 in a low impedance path from the mains electricity input from
12 said network to said mains electricity output to said consumer's
13 premises for frequencies from zero frequency to a low frequency
14 of said low frequency high amplitude mains electricity power
15 signal;

16 a series combination of a coupling capacitor and a fuse
17 connected between said mains electricity input and a signal
18 input/output line to allow the telecommunication signal to pass
19 through the coupling capacitor and the fuse in a path between
20 said mains electricity input and the signal input/output line and
21 to attenuate low frequency components of said low frequency high
22 amplitude mains electricity power signal;

23 a second inductor connected between said signal input/output
24 line and ground, said second inductor providing a current path